

# DOCKETED

IN THE UNITED STATES DISTRICT COURT FOR THE  
SOUTHERN DISTRICT OF NEW YORK

74C1030

Midway Manufacturing Company :  
vs. :  
The Magnavox Company : 74 Civ 1657 CBM  
and : Deposition of Ralph  
Sanders Associates, Inc. : H. Baer  
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IN THE UNITED STATES DISTRICT COURT FOR THE  
NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION

The Magnavox Company, et al : Consolidated Actions  
vs. : 74 C 1030  
Bally Manufacturing : 74 C 2510  
Corporation, et al : 75 C 3153  
: 75 C 3933  
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Continued deposition of Ralph H.  
Baer taken pursuant to subpoena and notice at the  
office of Sanders Associates, Inc., Spit Brook Road,

**FILED**

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UNITED STATES DISTRICT COURT

ORIGINAL

South Nashua, New Hampshire, on Wednesday,  
February 18, 1976, commencing at 10:15 o'clock in the  
forenoon.

PRESENT:

For Midway Manufacturing Company  
and Bally Manufacturing Corporation:

Donald L. Welsh, Esq.

For Sanders Associates and  
Magnavox Company:

James T. Williams, Esq.

For Atari, Inc.:

Edward S. Wright, Esq.

For Sanders Associates:

Louis Etlinger, Esq., and  
Richard I. Seligman, Esq.

Stenotype Reporter:

Barry G. Nolin, C.S.R.

I N D E X

Sanders' Exhibits:

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the T.V. set from an antenna, etc., is a related entry

RALPH H. BAER

called as a witness in behalf of Midway Manufacturing Company and Bally Manufacturing Corporation, being first duly sworn, was examined and testified further as follows:

(Interrogatories by Mr. Welsh)

Q. Referring to Exhibit 37-1, 2 and 3, would you do the same thing with this exhibit that you did with respect to Exhibit 26, Mr. Baer?

A. Yes.

entry on who constructed the apparatus, there is the entry "William Harrison, and tested by William Harrison

MR. WILLIAMS: I assume you mean

read it --

Q. (By Mr. Welsh.) Yes, read into the record your entries but, also, indicate what the printed legends are.

A. Well, 37-1, 2 and 3 are patent disclosure sheets of the standard Sanders format of that time, that is, 1968.

This one is executed in pencil. Under "descriptive

Q. I think on that -- title," my entry is: "Method for local editing of

A. R.F.-T.V. transmissions." The "problem solved," in

Q. -- page they are legible. Could you go on to the next

receiver displaying the modulation of an R.F. trans-

A. The next page is, under "Descriptive title" is a mission without "entering" the T.V. set." Under "how it is solved," in my handwriting, "R.F. applied to

the T.V. set from an antenna, etc., is modulated from a local external source by placing variable attenuator before the antenna terminals and modulating this attenuator. Means for extracting horizontal and vertical sync are also provided." Next, under Item 4, my entry is as follows: "Need to superimpose video information on standard T.V. set, without necessitating connections to the interior circuitry and to extract sync signals." Under Item 6, which calls for an entry on who constructed the apparatus, there is the entry "William Harrison, and tested by William Harrison and R. H. Baer." Further entry, "Is commercial use contemplated?" My answer: "Yes," "Explain," my entry: "In conjunction with gaming, simulation, training, using cooperative T.V. station transmission such as CATV." Do you want me to read the rest of the self-explanatory -- and sync extraction also

- 3 Q. I think on that -- internal set connections." That's
- A. -- entries? the entries on that page, and page 30-1 is
- 4 Q. -- page they are legible. Could you go on to the next
2. page? was the method described here incorporated into
- A. The next page is, under "Descriptive title" is a
- A. repetition in my handwriting, "Method for local



editing of R.F.-T.V. transmissions." "Old method apparatus," my answer is "None." Under "Disadvantages of old apparatus or method" I entered the following: "Entering a T.V. signal into a standard receiver requires placing video information on a carrier. When an external transmitted carrier is already being received this becomes impossible, since non-synchronism produces objectionable beat signals." Under "Advantages of new apparatus" I entered the following: "Crowbar or antenna input attenuator control described allows video and color (chroma) modulation of a T.V. set receiving a standard signal without need to connect to its internal circuitry. This allows T.V. receiver attachments to be made in private home sets without need for trained technician." And the "Features believed to be new" I entered "Crowbar modulation and sync extraction also achieved without internal set connections." That's the end of the entries on that page, and page 37-3 is blank.

- Q. Now, was the method described here incorporated into the application for your 480 patent?
- A. Yes, I believe so.

Q: Here again, there is only reference to a standard T.V. receiver and not to a Raster scan T.V. type display?

A: That's right. Mr. Williams characterized the answer

Q: Mr. Baer, are you familiar with the 284 patent and the reissue patent No. 28507 which is a reissue of the 284 patent?

A: Yes. There one improvement which was considered to be -- which you call (Document handed to the witness by Mr. Welsh.)

Q: (By Mr. Welsh.) Do you consider that the apparatus disclosed in that patent constituted an improvement in the T.V. gaming art when compared with the apparatus of your 480 patent?

A: In my opinion, yes.

Q: And of what did that improvement consist?

A: MR. WILLIAMS: I object to the

Q: question using the phrase "that improvement." There are, again, a number of different apparatuses disclosed in both the 284 patent and the 480 patents, and the question is, therefore, vague, definitely.

Q: (By Mr. Welsh.) You stated that you consider that the apparatus here did constitute an improvement in the T.V. gaming art, did you not?

A. That's right, referring to.

Q. Would you tell us what that improvement was?

A. Well, I think Mr. Williams characterized the answer that I would have to give. There are many different improvements shown in 284 which extend the capabilities of the invention shown in 507 or its predecessor.

Q. Was there one improvement which was considered to be -- which you considered to be of greater scope than others?

MR. WILLIAMS: I object to the question because of the use of the term "greater scope." I don't understand what that phrase means in the

A. context of the question. I think the question is vague, because there are many different improvements.

Q. (By Mr. Welsh.) Do you understand the question?

A. Would you try to elaborate on it?

Q. Was any one of the many different improvements more important, in your view, than others?

MR. WILLIAMS: I also object to the question because it is not fixed to the time as to whether you are talking about the present or at the time of the development of the apparatus of 284 or

A. at the time of the filing date of 284 or just what

time you are referring to. I don't know of any in '60

or '69, whatever. THE WITNESS: If you are referring

to my recollection of what I might have thought at

the time Rusch filed for these patents, was one more

outstanding innovation. I think I can answer that.

(By Mr. Welsh.) Would you do so, please?

I think, among many other things, the introduction

of what we've come to characterize as ball games, the

hitting spots as the word is defined, was the most

of one or more important contributions. That is,

What other contributions do you recall as of the time

of filing? I don't know of the derivative of the

Well, Mr. Welsh, I find that very difficult to

answer, because there are so many different features

described in the various patents that at this late

date, unless I read them, I find them very difficult

to keep apart as far as where and who did what at

the time. It is impractical to differentiate.

Now you have recalled one of the improvements or

contributions, as you referred to it. Do you of

recall, now, any others? If you wish to refer to the

patent; that is, for an effective hockey game, for

If I do that, I'll be reinterpreting what I remember,

what I considered to be different or new back in '68 or '69, whatever the case may be, in the light of what I read now, and I don't know what that can prove.

Q. Well, then, without referring to the patent, do you recall any other improvements than the introduction of ball games?

A. Yes, certainly. All those concepts and circuit configurations that grew from them that have to do with ball motion, which is a function of the manner in which the ball is hit by hitting spots, that is, all those details which deal with the balls response as a function of the derivative of the hitting motion at the time of the impact.

Q. Are you speaking about the differentiating and integrating circuits that you discussed earlier?

A. Yes, the ~~gater~~ differentiator which is described as ~~gater~~ differentiator and subsequent integration of the output of the ~~gater~~ differentiator.

Q. Do you recall any other improvements?

A. I am not certain, now, but I think the concept of four wall bounce, that is, multiple wall bounce such as that necessary for an effective hockey game, for example.

21 Q. Do you recall any others?

A. Yes, Rusch also made some contributions to detailed circuit improvements in the horizontal and vertical sync oscillator circuits. ended to be accomplished,

22 Q. Any others? use of that feature, so it is a little

A. If my recollection serves me correctly, the creation and concept of the whole series of different action games such as ping pong, hockey were a major

23 Q. contribution. Mr. Rusch with having conceived the game.

24 Q. Is that concept related to the earlier statement of improvement of the introduction of ball games?

A. Yes. the best of my recollection, that's how it was.

25 Q. More or less the same thing, is it not? bounce necessarily

A. Yes. a hockey game, for example. Do you also credit

26 Q. And is that concept due to the introduction of the

A. bounce feature?

30 Q. By bounce you mean a symbol that's capable of wall rebounding from other symbols? I suppose the answer

A. would be yes. the wall bounce I mean the provision for

27 Q. Could the major improvement be characterized very simply as introduction of the bounce feature to the TV game concepts? intercept between the ball and the wall

A. Well, that's a pretty fair characterization.

27 Q. Just pretty fair or --

A. Well, it's a little hard to associate in my mind the bounce feature with the games which they intended to accomplish, which is intended to be accomplished, through the use of that feature, so it is a little like putting the cart before the horse. The concept of a game has to come first before one needs a bounce feature.

28 Q. Do you credit Mr. Rusch with having conceived the ping pong type game where one image appears to bounce off another?

A. To the best of my recollection, that's how it was.

29 Q. Now, you mentioned the multiple wall bounce necessary for a hockey game, for example. Do you also credit Mr. Rusch with conceiving that feature?

A. I believe so.

30 Q. Would you describe what you meant by multiple wall bounce?

A. Yes, by multiple wall bounce I mean the provision for these two barriers, either in a vertical plane or in the horizontal plane, which are capable of reflecting the ball upon intercept between the ball and the wall symbol.

31 Q. Now, you just used the phrase wall symbol. Earlier did you refer to bouncing off of the edges of the screen? MR. WELSH: You can read the

A. No, I didn't.

MR. WILLIAMS: The testimony will speak for itself.

MR. WELSH: I didn't recall, so I was asking him. Image rebounding from a player image

32 Q. (By Mr. Welsh.) Do I understand correctly, then, that you also credit Mr. Rusch with conceiving the idea of providing wall symbols with a ball image rebounding

35 Q. off of such wall symbols? elaborate? I'm not sure the record is clear MR. WILLIAMS: Well, again, Mr.

A. Baer, this should only be as to your present recollection. two images, rebounding becoming located on the screen.

THE WITNESS: Well, that's all it can be. As I said earlier, yes, I think that's true.

33 Q. (By Mr. Welsh.) At least, you don't credit yourself with that? off of a player image and the bounce of

A. I don't think so. of a wall image?

34 Q. Is the same thing true with respect to a ball rebounding,

37 Q. a ball image, rebounding off of a player image as distinguished from a wall image?



A. I don't think so. MR. WILLIAMS: Is what the same

Q. thing? Harrison conceive either of the bounce features? MR. WELSH: You can read the

A. previous question. The difficulty, I don't recollect. Again, I would have (The last question was read back by the reporter.) And that wasn't the purpose of these questions. THE WITNESS: The question was

Q. whether a ball image rebounding from a player image was conceived by Mr. Rusch or, in my opinion, or to the best of my recollection, and I believe the answer has to be yes, you listed?

Q. (By Mr. Welsh.) Would you elaborate? I'm not sure the record is clear. Yes, Mr. Rusch conceived --

A. Yes, Mr. Rusch conceived a bounce feature of two images,

Q. two symbols becoming located on the screens.

And like to make sure that it is understood that, represents my present recollection.

Q. And is that with respect to both the bounce of the ball image off of a player image and the bounce of the ball image off of a wall image? Well, I object to

A. Yes, question. You are again asking a very --

Q. And you did not conceive either of those bounce features? 80 patents, and it doesn't seem that there

A. I don't think so, even for him to make that kind of

Q. Did Mr. Harrison conceive either of the bounce or the  
features? MR. WELSH: Well, I am crying to

A. Well, with the same difficulty, I don't recollect. ~~ve-~~  
Again, I would have to go through the documents, and  
I thought we agreed that wasn't the purpose of these  
questions with respect to the apparatus of the 430 patent.

Q. Comparing the apparatus of the reissued patent 28507  
with the apparatus of your 480 patent, do you  
presently consider it to have the same improvements  
as those which you listed? The patents referred to as  
improvements, but MR. WILLIAMS: I object to the  
question. I don't know what improvements you are  
referring to as those which he listed. You are

Q. (By Mr. Welsh.) In response to my questions, the patents,  
not the apparatus. MR. WILLIAMS: I could you repeat  
the question again, please?

(The last question was read back  
by the reporter.) answering that question. In the  
first place, MR. WILLIAMS: Well, I object to  
the question. You are again asking him a very  
question which calls for a detailed analysis of the  
284 and 480 patents, and it doesn't seem that there

should be any reason for him to make that kind of analysis from memory. The patents speak for themselves.

MR. WELSH: Well, I am trying to determine what he considers to have been the improvements and what he now considers to be the improvements of the apparatus of the 284 and the reissue 28507 patents with respect to the apparatus of the 480 patent. Now, as I understand it, both the apparatus of the 480 and the reissue 28507 were incorporated into working models which were demonstrated, and I'm not asking him to state what the patents referred to as improvements, but what he considers to be the improvements of the apparatus.

MR. WILLIAMS: But you are referring to the apparatus as disclosed in the patents, not the apparatus that was actually constructed and demonstrated.

THE WITNESS: I can only say I have great difficulty answering that question. In the first place, neither 284 nor 28507 are my patents. They're Rusch's patents. In the second place, my recollection is that 507 is very similar in most details to 284, so I don't see where you can ask that

question and expect me to answer it.

41 Q. (By Mr. Welsh.) Well, I believe they're exactly the same, but it is the comparison of the 507 apparatus with the 480 apparatus.

A. I may have looked at those patents a hundred times, but I can't respond to the question, because at the moment I simply don't recollect which it is that 480 covers.

42 Q. You did testify, I believe, with respect to apparatus, specific apparatus, that was constructed, and I  
43 believe you also stated it was constructed as described in the 480 patent and the 284. Specifically, do you recall which model incorporated the apparatus of the 480?

A. I believe that yesterday we tried to relate 480 to the hardware in Exhibit 34 and, also, in parts of Exhibit 35, and I believe portions of 284 were also related to Exhibit 35.

43 Q. You consider that Exhibit 35 embodies the apparatus of the 480, which is your patent?

44 A. Yes.

MR. WILLIAMS: Well, again, there's

A. a number of apparatus in the 480 patent, some of which

may or may not be in a particular piece of hardware.

44 Q. (By Mr. Welsh.) Does Exhibit 35 not embody the

50 digital circuitry of the 285 patents?

A. Again, you are straining my recollection with respect

51 to the patent numbers and what's in them. me a break-

45 Q. There's the 285 patent. image generating circuitry,  
did you not? (Document handed to the witness

A. by Mr. Welsh.)

52 Q. Would you identify THE WITNESS: Well, we went through  
that yesterday, and the answer is yes.

46 Q. (By Mr. Welsh.) And that Exhibit 35 was demonstrated  
to R.C.A. among others? has been asked and answered.

A. Yes, we gone through these exhibits for some eleven

47 Q. Now, there was also a demonstration in January of 1968  
to Teleprompter? testimony.

53 A. That's correct. Was it Exhibit 29?

48 Q. And could you identify which exhibit number represents  
or which exhibit represents that apparatus?

MR. WILLIAMS: That question's  
been asked and answered as an earlier one.

49 Q. (By Mr. Welsh.) Just so the record at this portion  
is clear, re-board No. 27

A. All right. Will try. I believe the equipment I believe.

demonstrated to Teleprompter was that which we labeled Exhibit 30. We identified a minute ago; I think the

Q. And that was chassis No. 24? the unit that was shown

A. Yes, management people including their Mr. Elicser

Q. And you also constructed at an earlier time a bread-

Q. board of your original image generating circuitry, is

did you not? do you consider the apparatus of Exhibit

A. Yes, I did. As improvement over the apparatus of

Q. Would you identify that and tell us what exhibit number

A. that is?

Q. What are those improvements? MR. WILLIAMS: Well, again, I

A. object to this question has been asked and answered.

We've gone through these exhibits for some eleven days now in great detail. It doesn't seem necessary

Q. to repeat prior testimony. of the addition of the

Q. (By Mr. Welsh.) Was it Exhibit 29?

A. Yes. (Exhibit handed to the witness by

Q. Mr. Welsh.) Is Exhibit 30 apparatus to be an improvement

ment over that of THE WITNESS: I don't believe so,

Mr. Welsh. I think it was an earlier one. Again, I

Q. (By Mr. Welsh.) Exhibit 24, which bears the

number, breadboard No. 24? Exhibits 30 and Exhibit 29 are

A. Exhibit 24 was the original breadboard which, I believe,

you asked what earlier one going backwards in time from the one we identified a minute ago; I think the predecessor was Exhibit 28, the unit that was shown to management people including their Mr. Etlinger and Mr. Campman.

55 Q. Comparing Exhibit 30 to Exhibit 28 and the operation of the two, do you consider the apparatus of Exhibit 30 to possess improvements over the apparatus of Exhibit 28?

A. Yes.

56 Q. What are those improvements?

A. They include, particularly, the ability to play active ball games in the case of Exhibit 30, which was not possible with Exhibit 28.

57 Q. Is that, again, the result of the addition of the bounce feature?

A. Yes.

58 Q. Do you consider Exhibit 30 apparatus to be an improvement over that of Exhibit 28 in any other respects?

MR. WILLIAMS: Well, again, I object to the question. We've had extensive testimony about what Exhibits 30 and Exhibit 28 are and what they include, and I don't see any reason for

subjecting the witness to a memory test of what is in those exhibits and how they are related to each other.

The witness has already given, as I said, extensive testimony as to what are in those various exhibits.

and what we discovered. MR. WELSH: Yes, but he has not

testified with respect to what he considered to be

Q. improvements, if any, of the apparatus in one exhibit over another?

A. Certainly. It is. He has described what is in each

Q. exhibit. I agree with that, but he had not stated

what he considers to be the improvements over the

A. others.

Q. How does the court, MR. WILLIAMS: I understand that, but you are now asking him to make a comparison which

A. requires a recall of the details of what is in each

of those exhibits, and I don't think it is fair to

ask the witness to recall his testimony which started

last November, I believe it was, with respect to

all of these exhibits, especially in the detail

required to make a comparison between two particular

ones. He has recollection and effectively put him

him to a test of THE WITNESS: I agree that what

you are asking me to do is to recall earlier testimony.



I did make such a comparison. I could sit here and, probably, come up with one or two additional items late beyond the ball game, but I am not really proving anything except that I can recall what transpired here and what we discovered by going through the documentation

62 Q. laboriously over the last ten or twelve sessions.

59 Q. (By Mr. Welsh.) At least you do remember the ball game feature? improvements over the apparatus of

A. Certainly. It is an outstanding feature.

60 Q. Are you familiar with the 285 patent which reissued as No. 28598? are are many different apparatus in both

A. Yes, those patents, and the question is therefore what

61 Q. How does the apparatus of that patent differ from the

63 Q. apparatus in the 507 patent? as an inventor, are you

A. Well of the 28598 reissue patent?

A. That's correct. MR. WILLIAMS: Again, I object.

64 Q. You are asking for a detailed comparison of the

A. apparatus of two different patents each of which

65 Q. shows a number of different circuits and particular

A. pieces of apparatus, and you are asking the witness

to state his recollection and effectively putting

him to a test of his memory which, really, has no

relevance to this action at all. More relevant

pieces of paper to THE WITNESS: I quite agree. I think this is completely unfair to expect me to relate the details in many patents before us without reference to them and to state differences or similarities from memory. I simply cannot do that. It is ridiculous

62 Q. (By Mr. Welsh:) Do you consider, that the apparatus which resulted in the reissue patent 28598 to have

66 A. contained any improvements over the apparatus of

A. reissued patent 5072 expected to recall that detail.

You'd have to rely MR. WILLIAMS: Again, I have to

note that there are many different apparatus in both of those patents, and the question is therefore vague

67 Q. and indefinite. The records did not refresh your

63 Q. (By Mr. Welsh.) You are named as an inventor, are you

A. not, of the 28598 reissued patent? you asked me to

A. That's correct. minutes ago refer to testimony which

64 Q. Do you know what you invented? I can't possibly

A. whatever it says in the patent to your question

65 Q. You don't know, yourself? or, it is not practical.

A. Mr. Welsh, those patents are based on inventions

68 Q. made in some cases, close to a decade ago. When

we wrote -- by we I mean the individuals concerned as here, myself, Busch, Harrison -- wrote internal

pieces of paper to the patent office disclosing facets of these games which, eventually, wound up in figures and, eventually, resulted in issued patents, we did that in good faith, based upon the intimate knowledge of who struck John in those days. It is ridiculous to ask me at this date to recall, specifically, who did what, and I'm not going to do it.

66 Q. You do not know, I take it?

A. I simply cannot be expected to recall that detail. You'd have to rely on the records which we went through in great detail and the integrity of the people involved.

67 Q. Going through the records did not refresh your recollection?

A. The elements of the record which you asked me to recollect a few minutes ago refer to testimony which we went through two months ago. I can't possibly recall all the details to answer your question definitely two months later. It is not practical. It is not fair.

68 Q. I believe the present question is directed to a

A. development which we discussed just last week and as

74 Q. recently as yesterday.

A. If that's the case, I do not understand your

question. Strictly on recollection, again, I believe

69 Q. Do you recall Exhibit 35 which we discussed yesterday  
and the characteristics of games playable with that?

A. Yes, sir.

70 Q. Do you recall Exhibit 30 which was used in the

A. demonstration to a Teleprompter and the games which were  
possible with that? MR. WILLIAMS: Again, we've gone

A. Yes, sir. What you can play on both those exhibits, and

71 Q. Comparing, then, Exhibit 35 with Exhibit 30, do you  
consider the apparatus of Exhibit 35 to constitute an  
improvement over the other apparatus of Exhibit 30?

A. I think you asked that question before, Mr. Welsh.

The answer is yes to Exhibit 35.

72 Q. I believe before we were discussing Exhibit 30 with  
respect to Exhibit 28 and this, now, is Exhibit 35  
with respect to Exhibit 30, is that correct?

A. Reconsidering the question -- That's just what I

73 Q. In other words, the apparatus demonstrated to R.C.A.  
as compared to the apparatus demonstrated to Tele-  
prompter? I think the record will show which game

A. The answer is still yes. Not at the other.

74 Q. In what respects is the apparatus in 35 an improvement

over that of Exhibit 30? We're going through details.

A. Going strictly on recollection, again, I believe that there are additional games playable with the apparatus of Exhibit 35 vis-a-vis those of the apparatus of Exhibit 30.

75

Q. And what additional games?

A. Well, handball game, I believe. An exposition of what differences you can -- MR. WILLIAMS: Again, we've gone through what you can play on both those exhibits, and the record will be fairly clear as to what you can play on one and what you can't play on the other. Again and find out MR. WELSH: The record does not show what Mr. Baer, himself, considered to be an improvement of Exhibit 35 with respect to Exhibit 30.

MR. WILLIAMS: The last question you asked concerning specific games, which can be played on one and not on the other. Testifying with respect to it, that MR. WELSH: That's just amplifying what he thinks is the improvement in respect to the Teleprompter demonstration. MR. WILLIAMS: My statement still stands. I think the records will show which games can be played, on one and not on the other. The games that were demonstrated. THE WITNESS: Well, I agree with that

assessment. We spent days going through detailed paper work showing how we progressed on the bench from one piece of hardware to the next. Certainly, how could you have any more detailed expedition of improvements than that.

76

Q. (By Mr. Welsh.) There is a detailed exposition of differences, perhaps, but not an exposition of what differences you considered to be improvements.

MR. WILLIAMS: I'm afraid the only way to get at what you are doing, then, is to go back and go through that disposition of differences again and find out whether each one is an improvement. I don't think it is proper to have that witness repeat all that prior testimony.

MR. WELSH: I am not suggesting, Mr. Williams, that that be done. I asked the witness if he recalled this apparatus and testifying with respect to it, that is, Exhibit 35, yesterday and Exhibit 30 last week, which was with respect to the Teleprompter demonstration. Perhaps he doesn't recall any other improvements of Exhibit 35 with respect to Exhibit 30, but he said he did recall the games that were demonstrated with the apparatus. If he

77

considers certain games playable with the later apparatus, Exhibit 35, to be an improvement, if he remembers. I think it is appropriate for him to testify with respect to them. If he doesn't remember, then he doesn't remember a close-knit group of people. I was in THE WITNESS: Well, I believe I

mentioned handball as being a feature of 35, not one available in 30. Volleyball, I believe, is another one. The golf game, putting game, which was playable with an attachment to Exhibit 35 did not exist in Exhibit 30. At the moment, that is the limit of the improvements I can recall off a wall image?

Q. (By Mr. Welsh.) So the only improvements that you recall, comparing Exhibits 35 to Exhibit 30, involve the capability of playing additional games, including handball, volleyball, and the golf game?

MRS. WILLIAMS: He just stated his testimony. (sh.) Was it the same thing for both

games?

A. recollection at the moment.

Q. (By Mr. Welsh.) And you do not recall what you contributed -- strike that -- the feature of the ball bouncing off a wall? Did you have anything,

A. specifically, to do with the development of the portions of Exhibit 35 which made it possible to play these additional games?

A. I can only answer that by repeating my earlier testimony that we were a close-knit group of three people. I was in frequent touch with the day by day activity on the bench, and, certainly, we all contributed to the various facets of the many pieces of hardware we created and the concepts that made it possible.

79 Q. Was the feature that made it possible to play handball and volleyball with Exhibit 35 the capability of a ball image bounding off a wall image?

A. I'm sorry. I really lost the meaning of that question. Would you please repeat it?

(The last question was read back by the reporter.)

81 Q. (By Mr. Welsh.) THE WITNESS: No. Not necessarily.

80 Q. (By Mr. Welsh.) Was it the same thing for both games?

80 A. No. you will recall why the ball image for the

81 Q. Was the feature which made it possible to play handball using Exhibit 35 the feature of the ball bouncing off a wall?



A. Yes, I remember.

82 Q. What feature made it possible to play volleyball with Exhibit 35?

A. The presentation of a side view of a net symbol.

83 Q. Did you have anything to do with conceiving the use of the side view of a net symbol so you could play volleyball?

A. I really don't recollect. You'd have to go back through the records to establish that.

88 Q. That is that recollection? MR. WELSH: Let's take a break.

89 A. That recollection is (Whereupon, at 11:20 o'clock, some A.M., a short recess was taken.) a clear enough picture of what we had in mind when we invented the apparatus described in that patent.

89 Q. How did you AFTER RECESS at 11:25 A.M. that patent did not convey a clear enough picture of what you had in

84 Q. (By Mr. Welsh.) You are one of the inventors of reissue patent No. 28598, Exhibit 15, are you not?

A. That's right. I believe I have already testified.

85 Q. Do you understand why the application for reissue of the 3659285 patent -- couldn't I have what I just said read back? were discussed and questions were raised whether the (The last question was read back

by the reporter.)

86 Q. (By Mr. Welsh.) -- was filed?

MR. WILLIAMS: You said --

MR. SELIGMAN: The number is wrong.

87 Q. (By Mr. Welsh.) That question, again, do you understand why the application for this reissue patent 28598 was filed?

A. Well, I have a general recollection of why it was done at the time.

88 Q. What is that recollection?

91 A. That recollection is that the original patent in some specific instances did not convey a clear enough

A. picture of what we had in mind when we invented the apparatus described in that patent.

89 Q. How did you find out that the original patent did not

A. convey a clear enough picture of what you had in

93 Q. mind when you invented the apparatus described in the patent?

94 A. Well, Mr. Welsh, I believe I have already testified

A. to the fact that I attended one or several meetings in which the subject of certain definitions of items

95 Q. in that patent were discussed and questions were

A. raised whether there were, in my opinion, better

ways to define that which we invented some years prior than the words in the patents indicated.

Q. Did it occur to you, personally, prior to those meetings that the original patent did not convey a clear enough picture of what you had in mind at the time of your invention?

MR. WILLIAMS: Again, Mr. Baer, only if you recall.

THE WITNESS: I don't recall, specifically.

Q. (By Mr. Welsh.) Do you think there's a possibility it did occur to you?

A. Yes.

Q. Did you discuss it with either Mr. Rusch or Mr. Harrison prior to the meetings that you refer to?

A. I don't recall. I may have.

Q. Have you ever read the original patent 3659285?

A. Certainly.

Q. How many times have you read it?

A. In the course of seven or eight years probably quite a few times.

Q. Roughly how many?

A. I couldn't begin to guess.

96 Q. A rough approximation?

97 Q. Did you discuss the MR. WILLIAMS: Well, by he's already testified that he can't make a guess.

96a Q. (By Mrs. Welsh), You have no idea at all as to the application?

A. That's not a book. You don't read it from cover to cover. I certainly looked at parts of it quite often.

97 Q. What's the occasion of your doing that?

A. Well, as the record shows, there was continuing of activity on the general T.V. game program for quite a few years, and after the association with Magnavox and during that negotiation, I certainly had occasion to look at the patents. Certainly, I talked with Mr.

98 Q. Now, the original patent issued on April 25, 1972; the Magnavox negotiations were prior to that time, then, were they not?

104 A. They were in '71, I believe. More than one patent, have

99 Q. So you couldn't have read the patent before that date?

A. That's correct. More than one patent in relation to T.V.

100 Q. Did you read the application for the original patent?

105 A. Certainly.

101 Q. And that was at the time the application was filed,

106 Q. And you signed the papers in connection with the patent application? sign the papers for the different

A. Yes, yes, one for the patents?

102 Q. Did you discuss the application with anyone at that time? Over federal law it is that determined what

A. Well, certainly, I must have discussed the application with those individuals here at Sanders who were charged with its preparation. Did you use the

103 Q. Do you recall, specifically, doing that?

A. Again, Mr. Welsh, we're talking about a number of patents which were not necessarily all handled by the same individuals here at Sanders, and I couldn't recall that, either. So I don't know, specifically, who I talked with. Certainly, I talked with Mr. Seligman repeatedly, because he prepared many of the applications. I talked with Mr. Etlinger, maybe others. I don't recall.

104 Q. You have been an inventor in more than one patent, have you not?

A. Do you mean more than one patent in relation to T.V. games or in general?

105 Q. In general.

A. Yes.

106 Q. Do you follow any procedure when you sign the papers or when you sign the papers for the different

applications for the patents? in a limited space

A. Procedure is outlined by either company policy or by whatever federal law it is that determines what the company policy must be in the first place,

107 Q. With respect to the original application for patent 3659285 here, did you discuss the as to application with the attorney who prepared it with respect to terminology used or accuracy of

108 Q. description? h.) Is that a common procedure that you have followed with MR. WILLIAMS? I object to the question as to the details that were in discussions

A. that Mr. Baer might have had with the attorney who

109 Q. prepared the application because it is calling for information which is protected by the attorney-client

A. privilege, and I caution Mr. Baer that he should not

110 Q. answer any questions which would contain information protected by that privilege. as to any suggestion of yours? THE WITNESS: I would like to

A. respond, Mr. Williams, by saying that whenever a

111 Q. disclosure is made of the type we read from this and morning on company formats, it frequently results

A. in exchange of conversation between some individual for in the patent office and the inventor at a minimum

So as to clarify what few words in a limited space on these disclosure forms really intend to describe. Beyond that, if through one processor or another it's been decided to go forward with an application, certainly, it is routinely additional contact between the inventor and the patent attorney so as to prepare a meaningful application that represents what the inventor thinks is invented.

108 Q. (By Mr. Welsh:) Is that a common procedure that you have followed with respect to patent applications in which you've been named as an inventor?

A. Yes, it is company policy.

109 Q. And did you do that in connection with the application for original patent 3659285?

A. Yes, have to guess at what that means.

110 Q. Do you recall whether any corrections were made in that application in response to any suggestion of yours?

A. What do you mean by corrections, Mr. Welsh?

111 Q. Changes after you first received the application and read it and discussed it with the attorney.

112 Q. Yes.

A. I don't believe there's a simple yes or no answer for that question.

112 Q. Do you recall whether -- strike that.

You say there's no simple yes or no answer. Is there any answer to the question?

A. Well, in real life in any such situation I would think there are always problems relating to the understanding of the attorney or what was really intended, several go-arounds to clarify it, or if you want to equate the clarification of questions on the part of the attorney as corrections, yes, there were corrections made.

113 Q. With respect to the application for the original patent 3659285, did you examine that alone or with Mr. Baer -- I mean Mr. Rusch and Mr. Harrison also present?

A. I'd have to guess at what happened. I am certain each one of us, individually, read the drafts for the application, probably, at various stages during their generation, and I can only guess that we must have had many discussions between us on the subject. It is only natural.

114 Q. At the time of the filing of the application when you read it, did it accurately describe what you then thought to be the invention?



A. Certainly.

(Whereupon, the document is laid  
on the table.)

115

Q. Do you recall at that time whether you questioned any  
of the terminology that was used?

A. I can't recall that now, Mr. Welsh. signature, Mr.  
Seligman. I wonder MR. WELSH: Off the record? I  
ask the reporter to (Discussion off the record.)

116

Q. (By Mr. Welsh.) O. K. Mr. Baer, in a file above-  
marked 2837 stamped "work copy" on the outside which

117

Q. has been produced by Mr. Seligman as work copy file  
corresponding to the application for original patent  
No. 3659285, there appear to be two copies of a draft  
of patent application with interlineations. I ask you  
now to examine these interlineations and advise me if  
any of them were placed there by you? I'll hand you,  
first, this copy. THE WITNESS: Mr. Welsh, I'm not  
sure which of these (Document handed to the witness at.  
By Mr. Welsh.) series here. Where does the new  
material start, or THE WITNESS: Just looking at the  
first few pages, the answer is yes, some of the  
form lineations were placed there by myself.

MR. WELSH: Mr. Seligman, may we  
mark that draft as an exhibit, please. I'm all done.

118

Q. (By Mr. Welsh.) D. MR. SELIGMAN: Yes, documents in

there with notation. (Whereupon, the document above-referred to was marked Sanders' Exhibit No. 38 for Identification.)

A. No, I did not. MR. WELSH: There are also two copies of a letter or memo with your signature, Mr. Seligman. I wonder if we might mark those? I'll ask the reporter to mark this as 39. Maybe you'd like to do that until after the break.

Before, having had the (Whereupon, the document above-referred to was marked Sanders' Exhibit No. 39 for Identification.)

117 Q. (By Mr. Welsh.) Mr. Baer, there are other copies here with interlineations, also. Would you please go through these and advise me if any of them is in your handwriting?

THE WITNESS: (Documents handed to the witness by Mr. Welsh.)

THE WITNESS: Mr. Welsh, I'm not sure which of these documents you want me to look at. There's a whole series here. Where does the new material start, or do you want me to go through the whole stack?

119 Q. (By Mr. Welsh.) What did you see that caused you to wish to correct your statement?

A. Well, looking at 263, (Discussion off the record.)

Harrison, Busch, and (THE WITNESS: O. K. I'm all done.)

118 Q. (By Mr. Welsh.) Did you find any other documents in

there with notations in your handwriting other than Exhibit 38 which we've already marked?

A. No, I did not. Now, I am reviewing the file of the 285 patent, and I understand correctly MR. WELSH: Let's break for lunch. that the bouncing THE WITNESS: was One other observation. Maybe you'd like to defer that until after the break. Before, having had the opportunity to go through 285, now, in conjunction with looking for entries in my handwriting, I believe I made a mistake in testifying earlier here within the last hour or so as to who gets the credit for the original thoughts on the bouncing ball in the first place, and I guess some of the derivative names such as tennis, handball, and some of the others which, I believe, if I recollect correctly, I ascribed to Rusch about an hour ago here. That's manifestly wrong if that's what I did. I am happy to see that I'm also inventor of those details.

119 Q. (By Mr. Welsh.) What did you see that caused you to

121 Q. wish to correct your testimony?

A. Well, looking at 285, clearly, three of us, that is, Harrison, Rusch, and myself were co-inventors with

A. respect to the ball action details I just described,

1. And I think I characterized the origin incorrectly this morning. Is that right?

Q. Now, after reviewing the file of the 285 patent, do I understand correctly that it is your testimony that the bouncing ball feature was one of co-invention of all three of you; you, Mr. Rusch, and Mr. Harrison?ayer image and bouncing off of the wall image?

MR. WILLIAMS: I would comment that he's not thoroughly reviewed that thing. He's glanced through it for a specific purpose. As to the rest of his testimony: THE WITNESS: And I agree. If I can, I'd like to have the opportunity of looking at this material more closely, because, as I said, that having looked through it hurriedly for another purpose I seem to have discovered an error in my testimony this morning I want to bring to your attention, but I certainly didn't have a chance to look in the material in sufficient depth to make sure just what my ground is. As you characterize it in your last

Q. (By Mr. Welsh.) Now, when you say credit for the original thoughts of the bouncing ball, did you mean bouncing of the ball image off of a player image?

A. Yes. (The last question was read back)

- 122 Q. And did you also mean the bouncing of a ball image  
off of a wall image? MR. WILLIAMS: And my objection  
A. Yes. It stands. He said he did not have that feeling.
- 123 Q. So that now you feel that the correct, in fact,  
124 A. situation is that all three of you thought of the  
bouncing feature with respect to both bouncing of  
the player image and bouncing off of the wall image?  
A. I would like to have MR. WILLIAMS: I object to the  
question as a characterization of his testimony. He  
said that reviewing the file he had occasion to reassess  
part of his testimony, but that he would like to have  
an opportunity to go through other papers to determine  
what he thinks the facts to be. He did not say that he  
presently has a firm conviction of what those facts  
are. you reach that conclusion because you saw a  
bounce feature in MR. WELSH: I don't think I used  
the term firm conviction, Mr. Williams. Inventors!
- A. Well, certainly, MR. WILLIAMS: Well, he did not  
give testimony as you characterize it in your last  
question, I believe. I object to the question.

MR. WELSH: Could you read that  
question please?

(The last question was read back)

a recess for lunch was taken.)

by the reporter.) ON RECESS 1:15 P.M.

MR. WILLIAMS: And my objection

123 Q. still stands. He said he did not have that feeling, as I understand it 38, which you indicated occurred

124 Q. (By Mr. Welsh:) Is that a correct statement, Mr. Baer, as the facts now appear to you?

A. Perhaps, yes, but I would like to repeat that I would like to have the opportunity of looking at, especially, 284 and 285 on some other date to refresh my memory, because, obviously, it was mixed up, on that point earlier today, and it's only a cursory examination of 285 in connection with going through this the folder that alerted me to the fact there was something wrong with my testimony this morning on the draft.

125 Q. Did you reach that conclusion because you saw a bounce feature in the 285 application papers, and that

A. is, in the names of all three of you as inventors?

126 A. Well, certainly, that's what's causing me to reassess my statement of this morning which, to the best of my recollection, I believe, indicated otherwise.

A. Yes, sir. MR. WELSH: Well, let's break

127 Q. for lunch. Identify exhibit 38.

A. 38 is a Xerox copy (Whereupon, at 12:15 o'clock, P. M., a recess for lunch was taken.)

Docket No. AFTERNOON SESSION 1:30 P.M.

130. Q. Do you recognize that as a draft of the patent application?
- 126 Q. (By Mr. Welsh.) Mr. Baer, I hand you what has been  
A. marked as Exhibit 38, which you indicated contained  
some notes made by you. I also hand you Exhibit 39  
131 and ask if you could identify that?
- A. I don't know. (Documents handed to the witness  
132 by Mr. Welsh.)
- A. The figures are re- THE WITNESS: Yes, Exhibit 39 is a  
carbon copy of a memo addressed to Bill Rusch, that  
Harrison, and myself from Mr. Seligman with reference  
133 to Docket No. 2837 in which we're asked to review the  
draft copy of the patent application and asked to make  
A. changes by writing changes directly onto the draft.
- 127 Q. (By Mr. Welsh.) Do you recall receiving a copy of  
that memo?
- A. No, I don't recall. It one appears on page 6 of the
- 128 Q. That memo does set forth, however, the procedure that  
you indicated you had followed with other applications,  
134 is that correct? That is the notation that you placed there.
- A. Yes, sir. I do read, because it's been crossed out and
- 129 Q. Would you identify Exhibit 38? It is the memo to O. B. I
- A. 38 is a Xerox copy of a draft for patent application

Docket No. 2837. ~~general or vice versa for the primary~~

130 Q. Do you recognize that as a draft of the application for your patent No. 3659285? ~~Yes, I'm sorry.~~

A. Well, I would have an easier time recognizing it if I had the figures that went with the 2837.

131 Q. Are they in that file? ~~Yes, in the file.~~

A. I don't know. ~~Yes, in the file.~~

132 Q. Would you look? ~~out a word.~~

A. The figures are represented in the file several times over. Using the figures as an aid, it appears that is the draft from the 285 patent application.

133 Q. Now, you indicated earlier, I believe, that Exhibit

A. 38 contains some notations made by you?

A. Yes, I did.

134 Q. Would you point out where those notations are located?

A. All right. The first one appears on page 6 at the end of the paragraph starting with the word figures

137 Q. 8A-8C.

135 Q. And what's the notation that you placed there?

A. It's hard to read, because it's been crossed out and

138 Q. then, evidently, reinstated with the word "O. K." I believe it says figure 8C are schematic control used



to produce ~~hit~~ generator voltages for the primary flip flop shown in figure 9. The next appearance of a correction is on page 8 -- page 9, I'm sorry. There's a discrepancy here. This page is labeled page 9 in the upper right-hand corner by hand and under it on the left-hand margin in typing it says page 8, so it is the handwritten page 9 in the center of the page. I crossed out a word "shielded" in front of the word "shielded cable," and somewhere further downstream I entered the words "or unshielded with respect to the use of twin lead." Do you want me to go on?

Q. Yes, please.

A. On handwritten page 10, the third line after the words "Dot will disappear and --" I put a slash mark and the word "or" into the text, and then two lines below behind the words "Served slash reset switch" I corrected the word switch to the word switches by adding and E and an S.

137 Q. With what type of an instrument were those entries placed there?

A. Red pencil.

138 Q. And was the same thing true of the other entries that you indicated as being yours?

A. No, the first one I indicated as being mine was in standard black pencil and was crossed out subsequently with red pencil and then, I think, annotated again with the word "O. K." in red pencil. The word being

139 Q. I think your next page is page 9 was where you indicated there was an entry? the real meaning by

A. Yes, we already read that into the record. The word

140 Q. Yes, but I was asking what type of instrument was used?

141 A. Red pencil, and the same thing applies to page 10.

142 Q. Now, there appears some red pencil marking on a page that has a handwritten No. 8 on it.

143 A. Well, that might have been mine. It's undecipherable. It is a squiggle that crosses out a word.

A. Yes. I think they The next entry in my handwriting in red pencil is on page 17, handwritten a 7. A sentence was added below the lead paragraph. Do you want me to read what the sentence is? second paragraph

142 Q. Yes, the words "Hit dot from on off-screen --" I

A. The sentence is: "Control 54 may be manipulated by means of a knob or may be part of a mechanism such as a joystick" and there is another correction in the first line of that last paragraph on the same page

which I can't decipher, because it seems to be -- it seems as though I merely added a red line emphasis to make sure that the letters as I read them really were what I thought they were. There's the word herein that looks like here in other that was meant to be hereinafter, and I emphasized the real meaning by putting red pencil marks, and I corrected the word "English" with "English control" to start with a capital letter. -- following the end of the second paragraph.

143 Q. Was that correction made to some other interlineation?

A. Yes, it was made to an interlineation made, I believe, by Mr. Seligman. Only voltages 01 and 81. On the

144 Q. There's other interlineations on the pages you've covered so far, are there not? Two sentences in the

A. Yes. I think they are all Mr. Seligman's, but I'm not sure. On page 20 is the next appearance of an interlineation in my handwriting, again, in red pencil. In the seventh line of the second paragraph after the words "Hit dot from an off-screen --" I interject the words "position on one side of the screen" and cross out the word "left," and then on the next line I go on and say "An off-screen --" cross out the word "right position" and interject "on the

other side of the screen each time the flip flop --" etc. The next occurrence of an interlineation is on page 22 about half-way down the page where behind the word "output from the wall dot generator" I inject "or line." I don't know. I think the next word was meant for -- or there is just an O there followed by the word "bar generator." The next occurrence is on page handwritten 24 with an additional sentence behind the -- following the end of the second paragraph. The sentence says, "The horizontal position of

paddles A and B are similarly controlled by controls and knobs to supply voltages E1 and E2." On the

bottom of page 31 is an entry which by reference is meant to be interjected between two sentences in the

middle of the first paragraph after the words, "The

dot generator 142." Following is meant to be inter-

jected: "Amplifiers may be eliminated by special

construction of the joy stick coupling to the potentiometers so as to produce a larger voltage swing directly

from the potentiometers." And at the bottom, on the

bottom line of the first paragraph the word "with" is

crossed out, again, in red pencil. On page 48 in the

line that starts with the word photocell I crossed out

the word "and," a-n-d, and injected "and hitting" so that the whole sentence reads: "By aiming, shooting at, and hitting the dot." On the next page, page 49, two-thirds of the way down the first paragraph the line that starts with the word "remain" I correct the handwritten word "their," t-h-e-i-r, to t-h-e-r-e, "there" in red pencil. Now, under claim 16 -- I can't read the page number. 58, it's 58. I correct the next to last sentence of the first paragraph by crossing out the word "dot" and substituting the word "bar."

145 Q. Was that a claim on that page?

A. Yes, the whole sentence read "Means for generating a 'net dot'" which I changed to read "Means for generating a 'net bar.'"

146 Q. That was claim 16?

A. The beginning of claim 16. Claim 17 on page 59, the last word was changed from "dot" to "bar" in red pencil. Page 61 on the second line the word f-o-r, for, "for generating" is crossed out in red pencil. Under claim 20 in the first sentence the X behind the word "screen" is crossed out.

147 Q. Was that earlier correction on that page in claim 19?

A. Yes, there were earlier corrections which reproduced

a Xerox on my copy. THE WITNESS: Well, I don't recall precisely what the MR. WELSH: He's referring to your correction?

152 Q. (By Mr. Welsh.) Do THE WITNESS: We just went through

A. that. That is the word f-o-r, for. before. too, at.

148 Q. (By Mr. Welsh.) Yes, I just asked if that was going to claim 19. That to me it means a display which does

A. Yes, that's right. It's half-way down in claim 19. standards. That appears to be all the

153 Q. Did the word standard television receiver appear in any of the corrections I made to this copy of the docket. anything

149 Q. Now, that draft contains the reference to television receivers, does it not? WILLIAMS: Again, if you

A. Yes, it does.

150 Q. In fact, the second line refers to standard monochrome and color television receivers, is that correct? the type

A. Yes, that's correct. in general usage.

151 Q. What did the term "standard television" -- strike

A. that. such as in the cases, for example.

Q. And did such receiver mean to you at the time you reviewed that

A. Yes, that's correct. Yes, that's correct.

156 Q. Did all television receivers at that time include I.F.

and R.F. sections? MR. WILLIAMS: If you recall, Mr.

Baer. MR. WILLIAMS: At what?

THE WITNESS: Well, I don't recall precisely what the term meant to me at that time. How could I?

152 Q. (By Mr. Welsh.) Do you recall, generally?

A. We've been all over this territory before, too, Mr. Welsh. I believe I answered it before as I'm going to answer now that to me it means a display which uses Raster scan techniques in accordance with industry standards.

153 Q. Did the word standard television receiver mean anything different than television receiver to you?

154 MR. WILLIAMS: Again, if you recall.

THE WITNESS: Well, to the best of my recollection, it simply meant receiver of the type that would be found in general usage.

154 Q. (By Mr. Welsh.) Such as in the homes?

A. Such as in the homes, for example.

155 Q. And did such receivers include R.F. and I.F. sections?

A. Yes, home receivers would, certainly.

156 Q. Did all television receivers at that time include I.F. and R.F. sections?

MR. WILLIAMS: At what? F. and I.F.

- 157 Q. (By Mr. Welsh.) At the time he examined this draft  
 100 of the application, television receivers, within your  
 knowledge, at that MR. WILLIAMS: Again? Mr. Baer: --  
 well, I guess I object to the question as lacking a  
 foundation. There's certainly no testimony in this  
 record which will state that Mr. Baer had knowledge of  
 all television receivers and what they consisted of.  
 receivers which THE WITNESS: Are you still waiting  
 for an answer to broadcast or cablecast signals in general.
- 158 Q. (By Mr. Welsh.) Yes. From earlier simply because the  
 A. Sorry. I thought Mr. Williams took care of your  
 101 question. Welsh: Were you familiar with any television  
 159 Q. Well, he may have tried to answer it for you, but he  
 simply entered an objection. If you understand the  
 A. question, would you please answer it? He was not  
 hung up in the fact MR. WILLIAMS: I object to the  
 characterization of the objection as attempting to  
 answer the question. Before, Mr. Welsh, I said repeatedly  
 that I don't see THE WITNESS: Sorry. Let me, answer  
 the question by saying that any television receiver  
 meant for the reception of transmitted signals by  
 television broadcast stations through the air or  
 over the cable of necessity had to have R.F. and I.F.



Sections over a cable in which case you can get into

Q. (By Mr. Welsh.) So television receivers, within your knowledge at that time had I.F. and R.F. sections?

A. Did you see the direct? MR. WILLIAMS: It don't think that is what his testimony was, and I object to the competency question as a mischaracterization of the testimony.

on the subject. THE WITNESS: You said those T.V.

A. receivers which I have familiarity with which required the reception of broadcast or cablecast signals in general required R.F. and I.F. front ends simply because the

A. transmission was done by R.F. carrier? language at

Q. (By Mr. Welsh.) Were you familiar with any television

A. receiver at that time that did not have the R.F. and I.F. sections? 8285 prior to the time it was issued?

A. I find it difficult to answer that, because we get hung up in the same line again, to differentiating between a television receiver and a television monitor, and all through that before, Mr. Welsh, I said repeatedly that I don't see either difference between the two, and the difference between the two is strictly one that's a result of the application of the display, whether it's in an environment that requires R.F. transmission as an intermediate or where video gets shipped out

1. directly over a cable in which case you can dispense with the front end, meaning the R.F.'s and I.F.'s, but

A. I don't see the difference.

162 Q. Did you see the difference at that time? 9285 on A. 1.

A. I couldn't have. I thought about what to me is generic definition. How could I have a different opinion

A. on the subject.

163 Q. Did you question any of the language in that draft of the application other than those portions which you have corrected at the time that you made the corrections?

A. I don't recall questioning any of the language at that time. I recall which the descriptors give it a

164 Q. Did you have occasion to review the application for patent No. 3659285 prior to the time it was issued?

A. I think we've been through that, also. No specific recollection, but it is natural that almost invariably happens in the course of preparing an application.

There's a certain amount of interchange between the

166 Q. attorney making it or preparing the draft and the inventors for the usual reasons. So I can only draw

A. the conclusion that, yes, indeed, I must have had a

167 Q. number of prior occasions to review the beginnings of

A. that draft. I cannot recall which came first.

165 Q. On those other occasions do you recall questioning  
the meaning of the language?

A. No, I do not.

166 Q. Subsequent to the issuance of patent 3659285 on April  
25, 1972, did you have or have you had occasion to review  
the language of that application or patent?

A. Yes, indeed.

167 Q. And on any of those occasions did you question the  
meaning of the language in the patent?

A. I don't know whether I can say that I question the  
meaning, but, certainly, the possible interpretation  
and the limitations which the descriptors give it in  
the patents place on the whole concept of T.V. games

174 Q. I thought were getting protection.

MR. WELSH: Could you read that

A. answer back, please?

(The last answer was read back by  
the reporter.)

168 Q. (By Mr. Welsh.) Did you recognize such interpretation  
and limitations independently, that is, by yourself?

A. I can't recall that, Mr. Welsh.

169 Q. On did someone else call them to your attention?

A. I really cannot recall which came first.

- 170 Q. When did you first become aware of the limitations?
- A. Again, I cannot pin a specific date on that situation.
- 171 Q. Can you pin a specific circumstance on that situation?
- A. Yes, in, not a specific circumstance, but a series of circumstances, a particular, the appearance in public of coin-operated video games, the intent of
- 172 Q. When did you first become aware of such games?
- A. I'd have to look into the records to refresh my memory. If I am, not mistaken, it was sometime in '72.
- 173 Q. At that time did you examine the language of patent No. 3659285?
- A. Sometime after having been made aware of the existence of video games I did examine the wordage in 285.
- 174 Q. Did you draw the conclusion that that wordage contained limitations by yourself?
- A. I find it impossible to reconstruct just what happened, Mr. Welsh. WILLIAMS: I object to the
- 175 Q. Did you convey that thought to anyone else?
- A. Well, just when discussions on that subject started between myself and the members of the patent department I can't pinpoint. Certainly, there were ensuing discussions on the relationship between video games and our patents, please.

176

Q. Was it, then, in such suggestions that the interpretation of the language of the 285 patent having limitations came up? MR. WILLIAMS: well, if you are,

A. Again, strictly going from memory, I felt that the references to a television receiver are extremely restrictive, not really reflective of the intent of the invention, and I was concerned from the beginning that the specific references in many places to, tele- vision receivers, and only in a few places to Raster scan or display devices or some other words would cause difficulty in interpreting the applicability of our patents to video games. to build such a picture of

177

Q. But didn't you when you first prepared your patent

178

disclosure sheet, Exhibit 36-1, 2, and 3, contemplate only, as it states there, standard black and white

A. or color T.V. sets? the word ubiquitous when we had discussion on that MR. WILLIAMS: I object to the

179

Q. question.

A. But I also distinct MR. WELSH: I think the question is quite clear, Mr. Williams, and I'd like to have the witness answer it. usch and Harrison and I talk about many other forms of MR. WILLIAMS: Would you read the question back, please? about with a person,

(The last question was read back by the reporter.)

MR. WILLIAMS: Well, if you are, by that question, attempting to characterize his previous testimony as to this document, then I object to the question as an improper characterization, but you may answer the question.

THE WITNESS: In all candor, from the very beginning there's no question playing television games on a commercial T.V. set was predominant in my mind because it made the most economic sense to attempt such an attempt to build such a piece of equipment.

178 Q. (By Mr. Welsh.) That's because there were so many available?

A. So many. I used the word ubiquitous when we had a discussion on that subject.

179 Q. Yes.

A. But I also distinctly remember, I think I said that before, that it wasn't very long afterwards that individuals like Rusch and Harrison and I talked about many other forms of T.V. gaming, in particular, very early in the game we talked about, with Solomon,,

A. we talked about the desirability of playing games in bars and places like bars, public places in which you could save money and prevent an F.C.C. radiation-type problem by eliminating the unnecessary R.F. to oscillator/modulator at the machine end, and the R.F. front end on the receiver end which are only necessary when you find yourself in a home environment when you cannot possibly reach into the television set, because you don't have control over the television set. It's an existing device sitting in somebody's home.

Q. Now, at the time application for patent 3659285 was filed, were you familiar with coin-operated amusement devices? ~~Yes.~~ 3659285 as Exhibit 40.

A. Well, in general I knew of their existence. There were such things as pinball machines and other coin-operated electromechanical devices, but I had no close familiarity with them.

Q. Did you state that prior to the time you had the thought of the T.V. games the first time you had not seen any coin-operated amusement devices?

A. Are you asking me whether I stated that once upon one

time? (Mr. Welch.) Mr. Welch, I had you exhibit 40 which

Q. Yes, a certified copy of a letter wrapped in contents of

A. I'm sorry. I don't recollect exactly what I said except that you took issue with my statement that I had never seen a pinball machine before which I

didn't say. I said I never paid any attention to

them, which was a fact. On the paper called on the

Q. Now at the time the application for patent 13659285

was filed were you not still primarily interested in

Q. taking advantage of the availability of the

A. ubiquitous number of T.V. sets in homes?

A. No question about that before you signed it?

A. Yes, sir. MR. WELSH: I'd like the reporter

Q. to mark this a certified copy of the file wrapper of

patent No. 3659285 as Exhibit 40.

A. I believe it does. (Whereupon, the document above-referred to was marked Sanders'

Q. And at the time you Exhibit No. 40 for identification.)

had you read the for (Whereupon, at 2:15 o'clock, P. M.,

A. a short recess was taken.)

Q. As of that date, August 11, 1960, had you become

aware of any coin-operated video games?

A. No, sir. AFTER RECESS 2:45 P.M.

Q. I might have asked you this, but I hope you'll bear

Q. (By Mr. Welsh:) Mr. Baer, I hand you Exhibit 40 which

is a certified copy of a file wrapper on contents of



A. the 285 patent, included, and I direct your attention to page 61 and ask if that is your signature appearing on that page? from two sources. Someone mentioned

A. Yes, it is. I believe, a Navy PX on the

185 Q. And that's your signature on the paper called on the power of an attorney and petition in the file? machine,

A. Yes. Rusch wrote a memo, I believe, to Mr. Selinger on

186 Q. And what date did you sign that? earance of coin-

A. August 18, 1969. mes, and I got a copy of that memo

187 Q. Did you read that paper before you signed it?

192 A. Yes, sir. Now if that's here?

188 Q. The paper states that you read the foregoing application, doesn't it not? that since it was written, so who knows.

A. I believe it does. Mr. WELSH: On the record.

189 Q. And at the time you signed the paper or prior thereto had you read the foregoing application? mark this?

A. Yes, I had. Mr. SELIGMAN: Sure, yes.

190 Q. As of that date, August 18, 1969, had you become aware of any coin-operated video games?

A. No, sir. (Whereupon the document is removed from the witness stand.)

191 Q. I might have asked you this, but I hope you'll bear

193 Q. With me. Do you recall, roughly, when you first saw such coin-operated games?

- A. You did ask it, and I said I wasn't exactly sure. By Not only that, I didn't first see them, but I first heard about them from two sources. Someone mentioned their appearance in, I believe, a Navy PX on the West Coast, and then Bill Rusch either saw or someone pointed out to him that he or she had seen a machine, and Rusch wrote a memo, I believe, to Mr. Etlinger on the subject reporting on the appearance of coin-operated TV games, and I got a copy of that memo or was shown a copy of the memo.
- Q. Do you know if that's here about which you were
- A. I think it's there somewhere. Don't ask me where. I haven't seen that since it was written, so who knows.
- A. Yes, it is. MR. WELSH: Off the record.
- Q. Do you know when in (Discussion off the record.) 1973, you received MR. WELSH: Could we mark this? at a Navy installation? MR. SELIGMAN: Sure, yes.
- A. Right a month. MR. WELSH: I now ask the reporter to mark this memo as Exhibit 41.
- Q. But within a month (Whereupon the document above-referred to was marked Sanders' Exhibit No. 41 for Identification.)
- A. Sometimes. MR. WELSH: Exhibit No. 41 for Identification.
- Q. (By Mr. Welsh.) I hand you Exhibit 41 and ask if you would, please, identify it. a copy of the

file wrapper and (Document handed to the witness by Mr. Welsh.) Patent No. 28198.

THE WITNESS: the Exhibit 41 is a copy referred to was a copy of a memo from Rusch to Lou Etlinger dated 9 July, 1973.

198 Q. '73, in which he reports that his son has seen coin-operated T.V. games in various locations at the near-by beaches. ion, power of attorney, and assent of

194 Q. (By Mr. Welsh.) That is near to here? or 4 of that

A. Near to New Hampshire or New Hampshire or near-by on Massachusetts.

195 Q. And, is that a copy of the memo about which you were

196 Q. speaking that was one of the ways you first became

A. aware of coin-operated T.V. games?

200 A. Yes, it is those that I saw.

196 Q. Do you know when in relation to this date of July 9,

201 Q. 1973, you received a report of coin-operated games

A. at a Navy installation? or in the parent department.

A. Either a month or two before or after this memo

202 Q. was written. the document to you for signature.

197 Q. But within a month or two? or the 11, either. probably

A. Sometime, probably, in the summer of '73.

202 Q. There are other sig MR. WELSH: I'd like the reporter,

now, to mark as Exhibit 42 a certified copy of the

file wrapper and contents of the application resulting  
in reissue patent No. 28598.

No, on the following (Whereupon, the document above-  
referred to was marked Sanders'  
Exhibit No. 42 for Identification.)

(By Mr. Welsh.) I now hand you Exhibit 42 and direct  
your attention to a five-page document entitled  
declaration, power of attorney, and assent of  
assignee and, more specifically, to page 4 of that  
document. I ask is that your signature appearing on  
that page?

Yes, that's my signature.

And when did you place your signature there? Is it

April 23, 1974. Right there. It's over to that page.

Did you compose that document?

No, sir, believe you read the document because it was

Do you know who did compose it?

Not specifically. Personnel in the patent department,  
I guess, and I don't sign a document I don't read.

Who presented the document to you for signature?

I don't remember that, specifically, either. Probably  
either Mr. Etlinger or Mr. Seligman. you read it?

There are other signatures on that same page, are  
there not?

A. Yes, sir, Bill Rusch's and Mr. Harrison's, foregoing.

Q. And did they sign on the same day? the foregoing.

A. No, on the following day, the 24th of April, 1974.

Q. Were they present when you signed them? one of the

A. I don't remember. I don't believe so, not.

Q. Did you read the paper before you signed it?

A. Yes, I did. I really read those when you signed the document.

Q. Do you have a specific recollection of that? the course

A. No, no more than I have a specific recollection of

having read any letter I get in the mail. I don't

Q. This document is longer than the usual declaration or

such as the one that you signed in Exhibit 40, is it?

A. That's right there. It's open to that page.

Q. Yes, if not in this specific form, certainly

Q. Do you believe you read the document because it was

your custom to read such documents? was the craft

A. Yes, more than that, we are required to sign the

document, and I don't sign a document I don't read.

Q. In its entirety? an error.

A. Entirety, certainly. I read to the end of it which

Q. Did you understand the document when you read it? did

A. I believe at the time I did. I read most of the foregoing

Q. The document states, and it is placed in the first

A. person plural, in part: "We have read the foregoing specifications and claims." Now, the foregoing

210 Q. specifications and claims are, if you refer to what's

A. ahead of the document, are cut out portions of the patent, the original patent, are they not?

A. Yes.

212 Q. Did you actually read those when you signed the document?

A. I know that I read them all repeatedly over the course of the week preceding the signature of the document. It certainly was fresh in my mind at the moment I signed the document.

213 Q. You say you read them repeatedly in the weeks before you signed the document?

A. Well, if not in this specific format, certainly in

A. the docket form which we looked at this morning.

214 Q. Now, what we looked at this morning was the draft of the application for the original 285 patent. Did you understand that?

A. Yes, I guess I am in error.

215 Q. Did you read in addition to the specification which is a cut-out portion of the full printed patent, did you read the claims that were a part of the foregoing specification and claims?

A. Do I understand your question to mean that you want me to read all the claims?

216 Q. No, did you at the time you signed?

A. I'm sorry. I misunderstood you. I thought you asked me whether or not I could read all the claims. Yes, I did.

217 Q. I would like to ask you, now, to read the  
221 declaration.

MR. WILLIAMS: You mean read the declaration into the record or read it to himself?

MR. WELSH: No, read it to himself.

THE WITNESS: Here it is.

218 Q. (By Mr. Welsh.) Do you still subscribe to all of the statements in the declaration as they are written?

A. Yes, I do.

219 Q. Is there any statement with which you have any difficulty subscribing to?

MR. WILLIAMS: Mr. Baer, I suggest that if you have any doubt at all that you take your time and read it very thoroughly.

A. Yes. THE WITNESS: Well, I thought I

22 Q. read it very carefully, and the answer is no, I don't have any problem with identifying or agreeing with any

of the statements made in the declaration at the present time.

Q. (By Mr. Welsh.) At the time you signed the declaration did you actually have the beliefs stated therein yourself, or did you subscribe to the statements because they had been prepared by the legal department?

A. No, I am certain the former was the case.

Q. I refer now, specifically, to the following portion on page 2 in the center: "-- that in the context of my invention and in the context of the description thereof in Sanders' patent 3659285 I have always understood and believed 'television receiver' and 'standard television receiver' to mean any cathode ray tube display incorporating circuitry for a Raster-type scan." Did you believe that the terms television receiver and standard television receiver at the time that 285 application was filed meant any cathode ray tube display incorporating circuitry for Raster-type scan even though it did not have the I.F. or R.F. sections active?

A. Yes.

Q. And you did not acquire that understanding only after you became familiar with coin-operated T.V. games?



A. No, sir: or modulation, A.F. front, I.F., and detector.

223

Q. Referring to the fifth line from the bottom of page 2, of the declaration and the part that reads: "While I believe the enumerated claims 1 and 2, 5 and 6 do, in fact, cover games using television monitors or broadcast receivers with the radio and intermediate

A. frequency portions by-passed or disabled --" Did you actually believe that those claims did, in fact, cover such games? or ten years ago. If that's what

A. Yes. Even by discussion with others, the answer is yes.

224

Q. On what did you base your belief as to the claims

A. On the fact that we had previously, and I think I

A. testified to that a number of occasions, frequently discussed the direct application of the video and

227

positive video output of the T.V. game to the video sections of a raster scan device. That repeatedly to bemoaned the fact that T.V. manufacturers were too

A. cheap, if you will allow me a colloquialism, to put

what we characterized as the phonograph jack into

standard television receivers which at very low

expense to them would have made it possible to enter

the video and sync circuits of a television receiver

directly instead of via the circuitous route of an R.F.

Q. oscillator modulation, R.F. front, I.F., and detector.

225

Q. Did you base that belief that the enumerated claims 1, 2, 5 and 6 covered the games using T.V. monitors or broadcast receivers with the radio and intermediate frequency portions by-passed, then, as a result of discussions with other people?

A. I believe I already testified that we -- by we, I mean Harrison, Rusch -- had discussions on the subject. That's my recollection many years ago. If that's what you mean by discussion with others, the answer is yes.

226

Q. In those discussions did you actually read the claims together?

A. Those discussions occurred years before any patent

was issued.

227

Q. Well, I ask you the basis for the belief that claims 1, 2, 5 and 6 covered T.V. games, and you referred to your earlier discussion?

228

A. That's right. The claims, I believe, were the claims you enumerated here, are valid, because we had discussions years before pointing to the fact that there are other ways of entering T.V. sets than via the antenna terminals. Unfortunately, it wasn't

A. practical to do so in a home environment, or for how

228

Q. Referring, now, to the middle of page 3, it contains

230

A. the statement: "That the inclusion of terms within claims of Sanders patent No. 33659285 such as claims 1 and 6 which might form a basis for any party to take the position that those claims do not include television games as a video display device -- "I'm sorry -- "television games using as a video display device either a television monitor or television receiver intended to receive broadcast television signals but with the radio frequency and intermediate frequency portions thereof by-passed or disabled was their error and without any deceptive intention"

231

Q. Whose error does that refer to? Just about everybody, I think error on the part of all of us who were in one way or another contributed to the disclosures, the writing of the applications, to the corrections of the applications for the various inventions.

232

Q. You referred yesterday to demonstrations made to RCA and others starting in January of 1969, and to patent specifically that you in those demonstrations used the apparatus of Exhibit 35. How long did those demonstrations go on?

229

A. Do you mean each individual demonstration or for how

233

many months?

230 Q. Well, the period of demonstrating.

A. Well, in most cases -- I am still not sure how to

234 W. answer your question correctly. In most cases the demonstration lasted for about two or three hours with

A. interruptions or repetition of facets of the demonstra-

235 Q. tion, in particular, participation by most of the

A. members of the visiting -- visitors' groups taking

236 Q. turns playing games.

231 Q. Did any of the visitors for whom the demonstrations

A. were given show any interest in going forward with

237 Q. T.V. games? others?

A. To the best of my recollection, just about everybody,

238 Q. not just at the RCA meeting but at subsequent

A. meetings, who saw and participated in the demonstrations

232 Q. appeared favorably impressed if not enthusiastic.

A. What was the purpose of the demonstrations?

A. To determine interest on the part of the companies or visitors represented in taking a license to patent or patents for the purpose of producing T.V. games.

I don't even know whether the patents were issued for the coming patent disclosures.

233 Q. It was contemplated that Sanders would grant a license

to one of those visitors for manufacturing T.V. games under your patent rights?

A. That's right.

234 Q. Did any of the persons to whom you demonstrated  
240 Exhibit 35 ever take a license?

A. Yes, Magnavox.

235 Q. Did any of the others ever take a license?

241 A. No, they did not.

236 Q. Did any of the others enter into negotiations with Sanders for a license?

A. Yes, they did, RCA, specifically.

237 Q. Any of the others?

A. I don't believe so.

238 Q. To what other companies were demonstrations made?

A. To General Electric, to representatives of Sylvania, to Warwick Electronics, to Zenith. I don't have the folder which you have in front of you available to refresh my memory.

(Document handed to the witness by Mr. Welsh.)

242 Q. THE WITNESS: Yes, to Motorola,

A. and I believe I've covered them all.

239 Q. (By Mr. Welsh.) When did these demonstrations take

A. place?

245 A. Again, with reference to Exhibit 21, they began in January of '69 and lasted or recurred at various times

A. during '69 and into July of 1970.

240 Q. What happened with respect to the RCA negotiations?

A. To the best of my recollection, an agreement was written and somehow never reached the signature stage.

241 Q. Do you know why?

A. I can only recollect in general that there was some disagreement on specific terms.

242 Q. When did the first demonstrations to Magnavox take place?

A. To Magnavox, well, indirectly, a demonstration took place to William Enders of RCA during that first RCA visit, and he took this knowledge of this demonstration with him to Magnavox, and he caused a repeat performance at Magnavox whose date I can't learn by looking at the cover of Exhibit 21, and I don't know whether it is

246 Q. anywhere in the body of Exhibit 21. I don't recall from memory.

243 Q. But Mr. Enders attended the first RCA demonstration?

A. That's right, as a member of the RCA team.

244 Q. Did he later, then, become employed by Magnavox?

A. Yes, he did. in connection with the 11-21-70.

245 Q. Did you find in Exhibit 21 anything which would indicate when the Magnavox demonstration first took place?

A. Not precisely. The one reference here is 21-121 in which in my handwriting I note Bill Enders' phone

247 Q. number, address, etc., at Magnavox in New York and the

A. request to have proprietary agreements sent to him, I assume, on to Magnavox, and the reference to an intention of visiting 7 or 17 July, '70. I don't under-

stand. It says '71 here. And a notation that he was with RCA up to three months ago, so he'd be, if you

249 Q. will, be employed by Magnavox.

A. With reference to (Whereupon, at 3:40 o'clock, P. M., a short recess was taken.) and another which pertains

to Lou Stlinger, we appear to have been there on August 26 and 27, 1970.

249 Q. Do you remember AFTER RECESS 3:50 P.M.

A. Yes, I do.

246 Q. (By Mrs. Welsh.) During our recess, Mr. Baer, were you able to find any documents which indicate the

A. circumstances and time when there was first contact

251 Q. with Magnavox? did you take

A. Subsequent to the telephone conversation which we,

referred to in connection with 21-121, there was a letter written by Mr. Etlinger to Mr. Enders on July 1, 1970, in which he invited Mr. Enders to come and look at a demonstration of T.V. games on July the 17th at 9:00 A.M.

- 247 Q. That's 1970?
- A. 1970, yes. Though I don't specifically remember Mr. Enders coming in, I suppose he was, and that subsequent to his visit here we, Dou Etlinger and I, made a visit to Fort Wayne where we demonstrated the equipment to a number of Magnavox personnel there. It was a fair.
- 248 Q. And when did that trip occur?
- A. With reference to some weekly expense reports, one to which pertains to myself and another which pertains to Dou Etlinger, we appear to have been there on or about August 26 and 27, 1970. Mr. Enders was there. I
- 249 Q. Do you remember that trip?
- A. Yes, I do. Division of the company.
- 250 Q. Did you take apparatus to Magnavox to demonstrate
- 251 Q. T.V. games to them?
- A. Yes, we did.
- 251 Q. What apparatus did you take?
- A. Exhibit 35, Exhibit 35A, associated overlays and,



Q. also, the golf-putting attachment which we were  
 A. unable to find. Oh, excuse me. And Exhibit -- I'm  
 sorry. Off the record. (Discussion off the record.)  
 construct a certain (Discussion off the record.) which  
 were to be used for THE WITNESS: Exhibit 31.

Q. (By Mr. Welsh.) Was the demonstration there similar

A. to the one you described with respect to RCA?

A. Essentially identical.

Q. Do you recall who was present at the demonstration  
 other than you and Mr. Etlinger?

A. I recall the names of several people. It was a fairly  
 large group. I can't recall everyone. Mr. Jerry Martin, who was then vice president of the group that  
 was eventually to be concerned with T.V. games was  
 present. Mr. Wiles was present. He was an assistant  
 to Mr. Martin. I believe Mr. Sanders was there. I  
 think he was a chief engineer of either the company  
 or some division of the company. Several senior

Q. engineering people whose names I don't recall.

Q. Did anything happen as a result of that meeting?

A. Well, yes. Not too long thereafter Magnavox expressed  
 a desire to go forward with a marketing, exploratory  
 market evaluation program. I made reference, namely,

- 255 Q. And what was done in that regard?
- A. I believe agreement was reached between Sanders and Magnavox permitting them to construct, design and construct a certain number of prototype units which were to be used for that market survey.
- 256 Q. That was to be constructed by Magnavox?
- A. By Magnavox. I do not recall.
- 257 Q. Is that agreement here? the date of that agreement is
- A. I believe 1951.
- A. That's correct, sir (Discussion off the record.)
- 260 Q. And the date of you THE WITNESS: The first agreement allowed Magnavox to construct whatever it was, ten or
- A. fifteen, market survey-research units.
- 261 Q. Did anything happen MR. WELSH: I'd like to ask the reporter to mark this as Exhibit 43.
- (Whereupon, the document above referred to was marked Sanders' dealings with Magnavox Exhibit No. 43 for Identification.)
- 258 Q. (By Mr. Welsh.) To hand you Exhibit 43 and ask if you could identify that, please? happened in the interview.
- A. Certainly, there must have been documents handed to the witness by Mr. Welsh.
- 263 Q. Did you not participate THE WITNESS: Exhibit 43 appears to be the document to which I made reference, namely,
- A.

agreement between Magnavox and Sanders which permits, permitted Magnavox to move forward in the T.V. game area, but I would have to read the text on whether it really represents agreement to allow them to make apparatus. Yes, here it is. Section 3, Magnavox shall have the right to make up to twenty units.

That's what I had recollected earlier.

Q. (By Mr. Welsh.) Now, the date of that agreement is March 3, 1971?

A. That's correct, sir.

Q. And the date of your visit with Mr. Etlinger was in August of 1970?

A. '70. August 26 and 27.

Q. Did anything happen with respect to your dealings with Magnavox in the meantime.

MR. WILLIAMS: You mean Mr. Baer's dealings with Magnavox?

Q. (By Mr. Welsh.) No, Sanders.

A. I don't know whether anything happened in the interim. Certainly, there must have been discussions. We concluded agreements.

Q. Did you not participate in discussions?

A. If I did, I do not specifically recollect.

264 Q. Do you recall whether Sanders undertook to do  
267 anything in connection with design or construction of  
the prototype?

A. Oh, no, we had no bench or labor construction activity  
of any kind that year or the following year that I  
can remember.

265 Q. Do I understand correctly, then, that nothing was  
done in the further design of the T.V. games devices  
here from January of '69 when the RCA demonstration  
was first given?

A. I'm not sure of that, but I believe that's true,  
because, to the best of my knowledge, Exhibit 35  
represents the end of the line of the hardware we  
built, at least in preparation for demonstrations to  
potential licensees, in 1969 and '70.

266 Q. Did Sanders furnish anything to Magnavox to assist  
Magnavox in the construction of the prototypes?

A. Yes, we lent them the breadboard unit which we had  
labeled Exhibit 35, I think, under the terms of this  
agreement, Exhibit 43. We gave them a certain period

A. of time during which they could use it for reference

Q. purposes in conjunction with some schematics that  
describe Exhibit 35 so that they could redesign it and

build their own units for use in the field.

Q. Did you furnish drawings, then, to Magnavox?

A. Yes, we did. Well, informal drawings were furnished, those drawings which describe what's in Exhibit 35.

Q. Are copies of those drawings here?

A. Yes, I believe the folder you have in your hand

represents that collection of drawings that was sent to Magnavox. In this folder there is an abbreviated list

Q. That's been marked as Exhibit 20.

A. Could you go through (Document handed to the witness by

Mr. Welsh.) I think they're not quite in order.

20-2 is figure 1, THE WITNESS: That's correct. entirely

Q. (By Mr. Welsh.) And these drawings -- were these specific drawings or are these copies of drawings that were sent to Magnavox? couple of days ago.

A. It appears that we have all the originals here.

A. We ran off blueprints or copies which we sent to Magnavox, blueprint or Bruning.

Q. Those drawings have already been given identifying numbers, have they not? I'll save time -- this whole

A. Yes, they have. picked up by Harrison for the purpose of

Q. Could you go through them one by one and identify them, please? instead of more of the time you

A. The first one is 20-1, which is a listing at a T.V. gave device. It refers to seven different figures.

Q. Oh, I see. The drawings were entitled figure 1, 2, 3, etc. This list lists figure 1, block diagram; figure 2, a schematic, and so on and so forth.

Q. And are those drawings actually there?

A. Mr. Welsh, there are quite a few more figures, physically, in this folder than this abbreviated list on 20-1 shows.

Q. Could you go through them and identify them, please?

A. Yes, I can. I think they're not quite in order. 20-2 is figure 1, which is a block diagram of essentially what's in Exhibit 35, Figure 2 is a detailed

A. schematic which we had already looked at under some

Q. other exhibit number a couple of days ago.

Q. What date does 20-2 bear? That's 20-3, I believe.

A. Oh, I'm sorry. 20-2 has Harrison's signature on it with a date 3/24/71 next to it.

Q. And 20-3, 20-3, as far as I can tell, has no date.

Q. I might say that -- maybe I'll save time -- this whole

A. package was made up by Harrison for the purpose of

having Magnavox engineers look at relatively clean-

looking drawings instead of some of the tired and of

tattered schematics we had, so that I assume that the dates should all be within a day or two of 3/24/71.

277 Q. Now, Exhibit 20-1, which is the list of drawings, has a date, does it not?

282 A. Yes, 3/24/71.

278 Q. And does it refer to Exhibit 20-3?

A. Yes, it does. It calls for schematics and parts list of block breakdown 8. I think that means 3A through 3N, schematics and parts list of breakdown of block diagram of figure 1.

279 Q. May I direct your attention to the fact that Exhibit 20-3 contains the reference "fig," f-i-g, 2, is that correct?

A. 20-3, yes, that's right.

280 Q. Then is Exhibit 20-3 the document identified as figure 2 on 20-1?

A. Yes, test system schematic.

I understand this now. Do you want me to go on?

281 Q. Yes, please.

A. Evidently, there is not one figure 3. There's figure 3A through N, all of which are schematics and parts list pertaining to what he calls a block breakdown of

figure 1 and the schematic of figure 2, and, indeed, 3A is a schematic of the horizontal and vertical sync oscillator and so on and so forth. Do you want me to go through every last one of them?

Q. Yes.

A. All right. Figure 20-4 shows two schematics and is labeled "Horizontal and vertical sync multivibrators," and is dated 3/24/71.

20-5 is figure 3-B identified as an "Spot generator," and it shows the schematic of a spot generator.

20-6 is identified as figure 3-D and labeled "Primary flip flop," also done on the 24th of March, '71.

Figure 3-E is labeled "Secondary flip flop." It is Exhibit 20-7 and shows a schematic of the secondary flip flop or wite wall flip flop.

Figure 3-F is Exhibit 20-8. It is labeled "Crowbar reset and pump switch" and shows schematics of that part of the circuitry.

Figure 3-G is Exhibit 20-9 labeled "Gate matrix." It shows the diodes and resistors of that part of the gate matrix in Exhibit 35. No date



on this drawing.

Figure 3-H is Exhibit 20-10 and labeled "Rifle electronics and golf putting joy stick" and shows two schematics, one for the rifle electronics, one for the golf putting joy stick, same date, the 24th.

Figure 3-J is a schematic of a chromagenerator, Exhibit No. 20-11, same date.

Figure 3-K is Exhibit 20-12 and shows two schematics and is labeled "Joy stick amps and rifle 1 shot." It shows a corresponding schematic.

Figure 3-L is a schematic of a code generator labeled as such. It is Exhibit 20-13.

Figure 3-M Exhibit 20-14 has no figure number and is labeled "TV gaming device decoder." It is a schematic for Exhibit 31.

Figure -- it looks like figure 3-N1 and is a layout drawing, a sketch, actually, of the physical location of circuits as they appear when you look into the top of Exhibit 35.

Q. And what's the number of that document?

A. I'm sorry. That's 20-15. I don't know what that means. 20-16 is a similar view into the

bottom of Exhibit 35 showing the location of sub-assemblies, if you will, on what we call the bottom of Exhibit 35. I don't know whether I said it, but that was Exhibit 20-16. Exhibit 20-17 is figure 4-A of that initial listing on 20-1. It consists of a series of wave forms found at various places in the equipment. Exhibit 20-18 continues that depicting of wave forms and is called figure 4-B. Then there's a figure 4-C, Exhibit No. 20-19, that continues to show various wave forms.

Then we go to Exhibit 20-20 which is figure 5 that lists the game sequence which we used in the demonstration to Magnavox, which is identical to the one we looked at yesterday in connection with box 35, Exhibit 35.

That was the demonstration for RCA?

RCA and all the others.

Figure 20-21 -- I mean, Exhibit 20-21, I'm sorry, is figure 6 in the listing and is so designated and is called a T.V. gaming device block diagram. Game --

I believe that says vrs. circuitry, and I don't know

what that means. It looks like v-r-s. through

286

Q. Was there not another gaming block diagram?

A. Yes, there was. I think figure 1, which is Exhibit 20-2, is a block diagram in the sense that it shows schematic detail of interconnections between the various blocks in a system including some of the switch's functions. That's 20-2. On the other hand, 20-21 is what I call a flow diagram that shows what signals go from which block to what block, and I consider it as a simplified version of figure 1 of 20-2.

287

Q. Does 20-21 still represent the apparatus of Exhibit 35?

A. Oh, yes.

288

Q. Was there any written description that accompanied these diagrams other than the listing, such as Exhibit 20-1?

A. I don't remember, Mr. Welsh, and --- off the record.

Q. (Discussion off the record.)

THE WITNESS: Unless there is something contained in here that will refresh my memory, I don't remember turning out a functional description, and it doesn't appear to be here.

289

Q. (By Mr. Welsh.) Would you go on, then?

A. All right. The next exhibit is 20-22 through 23, are

two pages of electrical parts lists. That relates to specific circuits. In this case, the sync multi-vibrator and spot generator is specifically as shown in the upper left-hand corner on 20-22 and 20-23.

20-24 is a schematic, again, figure 3-C. Now, see what I meant by my earlier remark that the pages are out of sequence? Because we've gone past 3 to 4 and 5, and here we're back to figure 3 showing a summing amplifier and modulator and R.F. oscillator.

20-25 and 20-26, 27, 28, 29, 30, 31, 32, 33, 34, 35 are all parts lists, all identified as to which section of the breadboard system Exhibit 35 they pertain to.

20-36 is a schematic, a print this time, of the T.V. gaming device decoder which I thought we had already seen in the original before.

Q. Is that a copy of the one which was marked earlier?

A. Yes, it is. It is a print of Exhibit 20-14, so it is redundant.

20-37 seems to be a print of the sequence of games that were played, and I think we're getting to a whole lot of reproduction, now, of the originals which we have just gone through in

reduced format, that is, reduced to an 8-1/2 x 11 size from whatever sizes they might have been before.

Q. That goes from what number to what number?

A. That is 20-38 through 20-63.

20-64 is a reprint of an article written by George Kent of Magnavox on large screen solid state T.V. with quality performance, and that goes on through 20-69, and I have no idea why it is in this folder.

20-70 is a repetition of a printed, Xerox copy, rather, of 20-1, so it is redundant.

20-71, 72, 73 and on through 102 appear to be Xerox copies of the original schematics and parts list, and wave forms that we looked at earlier.

Q. Could you just take a moment and check that to be sure, because it doesn't include some newer material.

A. O. K. Do you want me to call them out as I look at them or just -- this folder --

Q. No, I don't think that will be -- I wrote and has

A. All right, re-rendering on --

Q. This group in particular, 20-73 and on. The reason I ask that is there seem to be quite a large number of parts lists, whereas there were only a couple of

parts lists in the numbers that you referred to previously?

A. There were quite a few, except we counted them two pages at a time interspersed with schematics, and here they are all bound together.

MR. WILLIAMS: Mr. Baer, take your time.

THE WITNESS: All right. If you like, but it's just having gone through them all, I can't tell at a glance whether they're in there or not. The only thing we have to double-check is whether the number of parts list correspond to the number, and that, of course, I can tell by inspection. There are 13 Xerox copied pages of parts lists here, so --

295 Q. (By Mr. Welsh.) There appear to be roughly that, a corresponding number. Does that complete --

3 A. No, it doesn't. There are other documents starting with 20-103 in this folder. 20-103 and 104 are reproductions of a contact report which I wrote and has my signature reporting on my visit along with Bill Harrison --

296 Q. On what date? \* was delivered to H. H. H.

A. -- to Fort Wayne on the 30th of March, 1971. 20-105, was

which is attached to this contact report, is a, roughly,  
 hierarchy of schematic, showing who is who in the  
 Magnavox corporate hierarchy who we met there at the  
 Magnavox or heard about in connection with T.V. games.  
 Do you want me to go on?

Q. Yes, please.

A. The next document is 20-166 which appears to be  
 another print of the schematic, Exhibit 35, which it  
 appears to be -- that is, it's a Bruning copy of  
 Exhibit 20-3. Finally, there's a blueprint copy of,  
 again, of figure 2 with some red ink markings on it  
 and pencil markings. agreement that we had

Q. Do you know who put the markings on?

A. No, I don't for two days. By just scanning that, it

Q. Do they mean anything to you? Say.

A. No, they confuse me, if anything. prototype in accordance

Q. You said Mr. Harrison prepared this packet?

A. Yes, it's entirely possible that this is irrelevant

Q. to the package. Is it any of the prototype?

Q. By that you mean it may not have -- no.

A. Been delivered. There's no way of knowing if it was in the

Q. -- been a copy of something delivered to Magnavox?

A. That's right. It might have been a schematic that was

marked up later for some other purpose. I don't recall.

303 Q. Now, referring to your March 30, 1971, trip on the subject of your document, 20-103, 104 and 105, do you recall that trip?

A. Yes, sir.

304 Q. What was the purpose of the trip?

311 A. To help Magnavox engineers to become acquainted with the detail functions of Exhibit 35 in anticipation of their effort to redesign and generate some new demonstration equipment for use in the field in accordance with the agreement that we had.

305 Q. How long were you there?

A. I believe for two days. By just scanning that, it looks like I was there for a day.

306 Q. Did Magnavox actually construct prototypes in accordance with the agreement?

A. Yes, I believe so.

307 Q. Did you ever examine any of those prototypes?

A. No, I never did get to see any of them.

308 Q. Do you know whether Magnavox made any changes in the circuitry which is shown in these diagrams that you've just been identifying?



A. You mean to those prototypes, in those prototypes?

I do not know.

Q. Did they consult with Sanders after the March 30th trip of you and Mr. Harrison to Fort Wayne?

A. I don't exactly recall whether there was an additional trip. I don't think so. They were very independent.

Q. You say they were very independent? Into production?

A. They were very independent. Into production.

Q. Now, we did refer in Exhibits 32A through 32E to a further contact with Magnavox in which your

A. consulting services were offered to them and, if I recall correctly, that nothing ever came of that negotiation?

A. Also, this was much later. This was long after Odyssey, which was the trade name they applied to their first commercial product that had become commercially available, or at least shortly after or sometime after Odyssey became available and not during the breadboard demonstration period.

Q. Do you recall any other thing that you did with or for Magnavox prior to the introduction of Odyssey?

A. No, to the best of my recollection, there was very little, if any, contact between us during the period

of time between our delivery of the data package we just went through and the time they first showed hardware to the public and the press at large.

Q. That was after they were in production?

A. Well, I would say that was when they were preparing for production, I believe, in March of '72.

Q. It was after they had decided to go into production?

A. Yes, also after they had written the new agreement with us.

Q. Is this agreement dated January 27, 1972?

A. That's right.

Q. Did MR. WELSH: Mr. Seligman, could we mark this as an exhibit? This is similar to the other one.

MR. SELIGMAN: Yes, no problem.

to what (Discussion off the record.)

MR. WELSH: Well, may we say this: if there's any problem, may we make Xerox copies of these and substitute them for the exhibits?

Q. MR. SELIGMAN: I'm sure there's no problem, because this agreement has got markings on it and, also, there appear notations that it the wasn't initialed by Mr. Rosell, so I'm sure this is

not the original copy, so --

(Discussion off the record.)

316 Q. (By Mr. Welsh.) Have you had occasion to examine the  
321 circuitry of any of the commercial Odyssey games of  
Magnavox?

A. Yes, I've had a schematic for the first Odyssey unit  
within a few months after it appeared on the market.

317 Q. Did you compare that circuitry with your own circuitry  
as represented by Exhibit 35 of the documents in  
Exhibit 20?

A. Yes, at one time or another.

318 Q. Did you find them to be the same or different?

322 A. No, they're different in quite a number of respects.

319 Q. Were they different in minor specs or major respects?

323 MR. WILLIAMS: I object to the  
question as to what a minor ~~respect~~ or ~~major respect~~ is.

THE WITNESS: I'd say there are  
many circuit changes to improve performance. I  
assume you want examples?

320 Q. (By Mr. Welsh.) I was just interested in the nature  
of the changes.

A. Of course, the interconnections in the machine, the  
method in which it is programmed are completely

different than the original Magnavox idea. The business of using plug-in cards to do the pre-programming in the detail design is all brand new.

321 Q. Did not some of your forms contemplate plug-in cards?

A. We might have talked about it, but they went ahead and did it, which is quite a bit different. Of course, I don't know what the cause or reason for all of the changes were, but some of them had to do with poor synchronization of some of the sets when used with the original breadboard, and they cleaned that up. A great deal of effort was expended on the R.F. section to meet FCC requirements and so on.

322 Q. Do you happen to remember any other?

A. No, the only thing that comes to mind is some changes they made to the circuitry in the rifle.

323 Q. Was the manner of play of the first commercial Odyssey game the same or different than the manner of play of your model, Exhibit 35?

A. Many of the games were either identical or similar, and some were brand new. Certainly, all the software that accompanied the games was brand new. All the basic games were essentially as they had been before, ping pong, tennis, handball, volleyball all appeared

either in the basic unit or in the options which  
Magnavox offered with the first unit.

MR. WELSH: Let's break. How  
about 9:30 in the morning?

MR. WILLIAMS: I have a slight  
problem.

MR. WELSH: 10:00?

MR. WILLIAMS: O. K.

Ralph H. Baer  
Deponent

THE STATE OF New Hampshire  
COUNTY OF Hillsborough ) SS.

Subscribed and sworn to before me this 10th  
day of May, 19 76.

Marilyn E. Trapalis  
Justice of the Peace and/or  
Notary Public

Marilyn E. Trapalis  
Notary Public  
My Commission Expires March 12, 1980